

IN THE CLAIMS:

Please cancel Claim 28 herein. Claims 1, 3, 4, 6, 7, 9, 10, 12, 13, 15, 16, 18, 19, 21, 22, 24, 25, and 27 have been amended herein. All of the pending claims 1 through 27 are presented below. This listing of claims will replace all prior versions and listings of claims in the application. Please enter these claims as amended.

Listing of Claims:

1. (Currently amended) An assembly method for a semiconductor device assembly using a wire bonding device having an upper clamp member and a lower clamp member, said method comprising:

providing at least a portion of a strip of ~~lead frames~~, leadframes, said strip having opposed rails, having dam bars between said opposed rails, having at least two inner leads located at a first level, having at least two outer leads located at a second level, having a die mount paddle located at a third level and having at least one integral clamping tab, said at least one integral clamping tab located at a fourth level extending outwardly for contact by said upper clamp member;

attaching a semiconductor device to said die mount paddle, said semiconductor device having a plurality of bond pads;

locating said strip of ~~lead frames~~ leadframes on said lower clamp member of said wire bonding device having said upper clamp member overlying portions of said at least two inner leads and portions of said at least one integral clamping tab; and

attaching at least one bond wire to said plurality of bond pads of said semiconductor device and said portions of said at least two inner leads.

2. (Previously presented) The method of claim 1, further comprising:
forming said die mount paddle having an upper surface thereof at a third level located below an
upper first level of said at least two inner leads; and
deforming said at least one integral clamping tab to clamp portions thereof.

3. (Currently amended) The method of claim 1, further comprising:
removing said strip of ~~lead frames~~ leadframes and said semiconductor device from said lower
clamp member; and
encapsulating a portion of said strip of ~~lead frames~~ leadframes, said semiconductor device, and
~~said~~ at least two bond wires extending between said strip of ~~lead frames~~ leadframes and
said semiconductor device in a material.

4. (Currently amended) A method for assembling a semiconductor device assembly
having a semiconductor device and portions of ~~a lead frame~~ leadframe using a wire bonding
device having an upper clamp member and a lower clamp member, said method comprising:
supplying at least a portion of a strip of ~~lead frames~~ leadframes, said strip having opposed rails,
having dam bars between said opposed rails, having at least two inner leads located at a
first vertical level, having at least two outer leads located at a second vertical level,
having a die mount paddle located at a third vertical level and having at least one integral
clamping tab, said at least one integral clamping tab located at a fourth vertical level
extending outwardly for contact by said upper clamp member;
attaching a semiconductor device to said die mount paddle, said semiconductor device having a
plurality of bond pads;
locating at least a portion ~~said strip of lead frames~~ leadframes on said lower clamp member of
said wire bonding device having said upper clamp member overlying portions of said at
least two inner leads and portions of said at least one integral clamping tab; and
attaching at least one bond wire to said plurality of bond pads of said semiconductor device and
said portions of said at least two inner leads.

5. (Previously presented) The method of claim 4, further comprising:
forming said die mount paddle having an upper surface thereof at a third vertical level located
below an upper first vertical level of said at least two inner leads; and
deforming said at least one integral clamping tab to clamp portions thereof.

6. (Currently amended) The method of claim 4, further comprising:
removing said strip of ~~lead frames~~ leadframes and said semiconductor device from said lower
clamp member; and
encapsulating a portion of said strip of ~~lead frames~~ leadframes, said semiconductor device, and
said at least two bond wires extending between said strip of ~~lead frames~~ leadframes and
said semiconductor device in a material.

7. (Currently amended) A method for assembling a semiconductor device assembly
having a semiconductor device and portions of ~~a lead frame~~ leadframe using a wire bonding
device having an upper clamp member and a lower clamp member, said method comprising:
providing at least a portion of a strip of ~~lead frames~~ leadframes, said strip having opposed rails,
having dam bars between said opposed rails, having at least two inner leads located at a
first vertical level, having at least two outer leads located at a second vertical level,
having a die mount paddle located at a third vertical level and having at least one integral
clamping tab, said at least one integral clamping tab located at a fourth vertical level
extending outwardly for contact by said upper clamp member, said die mount paddle
having a semiconductor device attached thereto, said semiconductor device having a
plurality of bond pads;
locating at least a portion of ~~said strip of lead frames~~ leadframes on said lower clamp member
of said wire bonding device having said upper clamp member overlying portions of said
at least two inner leads and portions of ~~said at least one integral clamping tab~~;

clamping portions of said ~~lead frame~~ leadframe using said upper clamp contacting portions of said ~~lead frame~~ leadframe while portions of said lower clamp contact portions of said ~~lead frame~~; leadframe; and

attaching at least one bond wire to said plurality of bond pads of said semiconductor device and said portions of said at least two inner leads.

8. (Previously presented) The method of claim 7, further comprising:
forming said die mount paddle having an upper surface thereof at a third vertical level located below an upper first vertical level of said at least two inner leads; and
deforming said at least one integral clamping tab to clamp portions thereof.

9. (Currently amended) The method of claim 7, further comprising:
removing said strip of ~~lead frames~~ leadframes and said semiconductor device from said lower clamp member; and
encapsulating a portion of said strip of ~~lead frames~~, leadframes, said semiconductor device, and said at least two bond wires extending between said strip of ~~lead frames~~ leadframes and said semiconductor device in a material.

10. (Currently amended) A method for assembling a semiconductor device assembly having a semiconductor device and portions of a ~~lead frame~~ leadframe using a wire bonding device having an upper clamp member and a lower clamp member, said method comprising: supplying a portion of a strip of ~~lead frames~~, leadframes, said strip having opposed rails, having dam bars between said opposed rails, having at least two inner leads located at a first vertical level, having at least two outer leads located at a second ~~vertical~~, vertical level, having a die mount paddle located at a third vertical level and having at least one integral clamping tab, said at least one integral clamping tab located at a fourth vertical level extending outwardly for contact by said upper clamp member, said die mount paddle having a semiconductor device attached thereto, said semiconductor device having a plurality bond pads; locating at least a portion of said strip of ~~lead frames~~ leadframes on said lower clamp member of said wire bonding device having said upper clamp member overlying portions of said at least two inner leads and portions of said at least one integral clamping tab; and attaching at least one bond wire to said plurality of bond pads of said semiconductor device and said portions of said at least two inner leads.

11. (Previously presented) The method of claim 10, further comprising: forming said die mount paddle having an upper surface thereof at a third vertical level located below an upper first vertical level of said at least two inner leads; and deforming said at least one integral clamping tab to clamp portions thereof.

12. (Currently amended) The method of claim 10, further comprising: removing said strip of ~~lead frames~~ leadframes and said semiconductor device from said lower clamp member; and encapsulating a portion of said strip of ~~lead frames~~, leadframes, said semiconductor device, and ~~said~~ at least two bond wires extending between said strip of ~~lead frames~~ leadframes and said semiconductor device in a material.

13. (Currently amended) A method for assembling a semiconductor device assembly having a semiconductor device and portions of ~~a lead frame~~ leadframe using a wire bonding device having an upper clamp member and a lower clamp member, said method comprising: supplying a portion of a strip of ~~lead frames~~, leadframes, said strip having opposed rails, having dam bars between said opposed rails, having at least two inner leads located at a first level, having at least two outer leads located at a second level, having a die mount paddle located at a third level and having at least one integral clamping tab, said at least one integral clamping tab located at a fourth level extending outwardly for contact by said upper clamp member, said die mount paddle having a semiconductor device attached thereto, said semiconductor device having a plurality of bond pads; locating at least a portion of ~~said strip of lead frames~~ leadframes on said lower clamp member of said wire bonding device having said upper clamp member overlying portions of said at least two inner leads and portions of said at least one integral clamping tab; preventing substantial movement of said die mount paddle by clamping a portion thereof; and attaching at least one bond wire to said plurality of bond pads of said semiconductor device and said portions of said at least two inner leads.

14. (Previously presented) The method of claim 13, further comprising: forming said die mount paddle having an upper surface thereof at a third vertical level located below an upper first vertical level of said at least two inner leads; and deforming said at least one integral clamping tab to clamp portions thereof.

15. (Currently amended) The method of claim 13, further comprising: removing said strip of ~~lead frames~~ leadframes and said semiconductor device from said lower clamp member; and encapsulating a portion of said strip of ~~lead frames~~, leadframes, said semiconductor device, and ~~said~~ at least two bond wires extending between said strip of ~~lead frames~~ leadframes and said semiconductor device in a material.

16. (Currently amended) A method for assembling a semiconductor device assembly having a semiconductor device and portions of ~~a lead frame~~ leadframe using a wire bonding device having an upper clamp member and a lower clamp member, said method comprising: supplying at least a portion of a strip of ~~lead frames~~, leadframes, said strip having opposed rails, having dam bars between said opposed rails, having at least two inner leads located at a first level, having at least two outer leads located at a second level, having a die mount paddle located at a third level and having at least one integral clamping tab, said at least one integral clamping tab located at a fourth level extending outwardly for contact by said upper clamp member, said die mount paddle having a semiconductor device attached thereto, said semiconductor device having a plurality of bond pads; locating at least a portion of ~~said strip of lead frames~~ leadframes on said lower clamp member of said wire bonding device having said upper clamp member overlying portions of said at least two inner leads and portions of said at least one integral clamping tab; forcing portions of said die mount paddle into contact with portions of said lower clamp; and attaching at least one bond wire to said plurality of bond pads of said semiconductor device and said portions of said at least two inner leads.

17. (Previously presented) The method of claim 16, further comprising: forming said die mount paddle having an upper surface thereof at a third vertical level located below an upper first vertical level of said at least two inner leads; and deforming said at least one integral clamping tab to clamp portions thereof.

18. (Currently amended) The method of claim 16, further comprising: removing said strip of ~~lead frames~~ leadframes and said semiconductor device from said lower clamp member; and encapsulating a portion of said strip of ~~lead frames~~, leadframes, said semiconductor device, and ~~said~~ at least two bond wires extending between said strip of ~~lead frames~~ leadframes and said semiconductor device in a material.

19. (Currently amended) A method for assembling a semiconductor device assembly having a semiconductor device and portions of ~~a lead frame~~ leadframe using a wire bonding device having an upper clamp member and a lower clamp member, said method comprising: supplying at least one ~~lead frame~~ leadframe from a strip of ~~lead frames~~ leadframes having opposed rails, having dam bars between said opposed rails, having at least two inner leads located at a first level, having at least two outer leads located at a second level, having a die mount paddle located at a third level and having at least one integral clamping tab, said at least one integral clamping tab located at a fourth level extending outwardly for contact by said upper clamp member, said die mount paddle having a semiconductor device attached thereto, said semiconductor device having a plurality of bond pads; locating at least a portion of ~~said at least one lead frame~~ leadframe on said lower clamp member of said wire bonding device having said upper clamp member overlying portions of said at least two inner leads and portions of ~~said at least one integral clamping tab~~; forcing portions of said die mount paddle into contact with portions of said lower clamp; and attaching at least one bond wire to said plurality of bond pads of said semiconductor device and said portions of said at least two inner leads.

20. (Previously presented) The method of claim 19, further comprising: forming said die mount paddle having an upper surface thereof at a third vertical level located below an upper first vertical level of said at least two inner leads; and deforming said at least one integral clamping tab to clamp portions thereof.

21. (Currently amended) The method of claim 19, further comprising:
removing said at least one ~~lead frame~~ leadframe and said semiconductor device from said lower
clamp member; and
encapsulating a portion of said at least one ~~lead frame~~, leadframe, said semiconductor device,
and ~~said~~ at least two bond wires extending between said strip of ~~lead frames~~ leadframes
and said semiconductor device in a material.

22. (Currently amended) A method for assembling a semiconductor device assembly
having a semiconductor device and portions of ~~a lead frame~~ leadframe using a wire bonding
device having an upper clamp member and a lower clamp member, said method comprising:
supplying at least one ~~lead frame~~ leadframe from a strip of ~~lead frames~~ leadframes having
opposed rails, having dam bars between said opposed rails, having at least two inner leads
located at a first level, having at least two outer leads located at a second level, having a
die mount paddle located at a third level and having at least one integral clamping tab,
said at least one integral clamping tab located at a fourth level extending outwardly for
contact by said upper clamp member, said die mount paddle having a semiconductor
device attached thereto, said semiconductor device having a plurality of bond pads;
locating at least a portion of ~~said at least one lead frame~~ leadframe on said lower clamp member
of said wire bonding device having said upper clamp member overlying portions of said
at least two inner leads and portions of ~~said at least one integral clamping tab~~;
preventing substantial movement of portions of said die mount paddle by contacting portions of
said die mount paddle with said upper clamp and said lower clamp; and
attaching at least one bond wire to said plurality of bond pads of said semiconductor device and
said portions of said at least two inner leads.

23. (Previously presented) The method of claim 22, further comprising: forming said die mount paddle having an upper surface thereof at a third vertical level located below an upper first vertical level of said at least two inner leads; and deforming said at least one integral clamping tab to clamp portions thereof.

24. (Currently amended) The method of claim 22, further comprising: removing said strip of ~~lead frames~~ leadframes and said semiconductor device from said lower clamp member; and encapsulating a portion of said at least one ~~lead frame~~ leadframe from a strip of ~~lead frames~~, leadframes, said semiconductor device, and ~~said~~ at least two bond wires extending between at least one ~~lead frame~~ leadframe from a strip of ~~lead frames~~ leadframes and said semiconductor device in a material.

25. (Currently amended) A method for assembling a semiconductor device assembly having a semiconductor device and portions of ~~a lead frame~~ leadframe using a wire bonding device having an upper clamp member and a lower clamp member, said method comprising: supplying at least one ~~lead frame~~ leadframe from a strip of ~~lead frames~~, leadframes, said strip having opposed rails, having dam bars between said opposed rails, having at least two inner leads, having at least two outer leads, having a die mount paddle located and having at least one integral clamping tab, said at least one integral clamping tab extending outwardly for contact by said upper clamp member, said die mount paddle having a semiconductor device attached thereto, said semiconductor device having a plurality of bond pads; locating at least a portion of ~~said strip of lead frames~~ leadframes on said lower clamp member of said wire bonding device having said upper clamp member overlying portions of said at least two inner leads and portions of ~~said~~ at least one integral clamping tab;

forcing portions of said die mount paddle into contact with portions of said lower clamp; and attaching at least one bond wire to said plurality of bond pads of said semiconductor device and said portions of said at least two inner leads.

26. (Previously presented) The method of claim 25, further comprising: forming said die mount paddle having an upper surface thereof at a third vertical level located below an upper first vertical level of said at least two inner leads; and deforming said at least one integral clamping tab to clamp portions thereof.

27. (Currently amended) The method of claim 25, further comprising: removing said at least one ~~lead frame~~ leadframe from a strip of ~~lead frames~~ leadframes and said semiconductor device from said lower clamp member; and encapsulating a portion of said ~~lead frame~~ leadframe from a strip of ~~lead frames~~ leadframes, said semiconductor device, and ~~said~~ at least two bond wires extending between said at least one ~~lead frame~~ leadframe from said strip of ~~lead frames~~ leadframes and said semiconductor device in a material.

28. (Cancelled)